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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/769,619 | 01/23/2001 | Ursula Murschall | 00/052 MFE | 3096 |

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2912 Crosby Road
Charlotte, NC 28211

EXAMINER

NGUYEN, KIMBERLY T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1774

DATE MAILED: 11/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

Office Action Summary

| | | | |
|--------------------------------|--|----------------------------------|--|
| Application No. 09/769,619 | | Applicant(s) MURSCHALL ET AL. | |
| Examiner Kimberly T. Nguyen | | Art Unit 1774 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This action is in response to the amendment submitted on August 20, 2002. It is acknowledged that claims 12 and 13 are cancelled.

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Due to Applicants' amendments, the previous rejections of claims 1 and 10 under 35 USC 112, 2nd paragraph are withdrawn.

Claim 15 recites the limitation "the outer layer(s)" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

Claims 1-5, 7, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 as previously stated in the Office Action submitted on April 25, 2002 in further view of Murschall et al., U.S. Pat. No. 5,900,294.

As to the new limitation in claims 1-4 that the crystallizable thermoplastic is a polyester polymer, Kim shows that the film comprises polyethylene terephthalate (Abstract).

As to the new limitation in claim 1 that the at least one titanium dioxide of the rutile type "is oxidatively coated" and the "titanium dioxide and the optical brightener are provided in the form of at least one masterbatch," claim 1 is rejected because the phrases "is oxidatively coated" and "are provided in the form of at least one masterbatch" introduces a process limitation to the product claim. The patentability of a product does not depend on its method of production. If

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the product in the product by process claim is the same as or obvious from a product of the prior art, the claims are unpatentable even though the prior art was made by a different process.

MPEP 2113. Further, process limitations are given no patentable weight in product claims.

In addition, though Kim shows that the titanium dioxide particles are coated with a zinc coating (column 2, lines 3-9) to improve light resistance, Kim does not show that the zinc coating is a zinc oxide coating as in instant claim 1. Murschall shows a multilayer film comprising white pigments of rutile titanium dioxide with a coating of zinc oxide (column 3, lines 47-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a zinc oxide coating on titanium dioxide because it is known that a zinc oxide coating improves lightfastness.

As to the new limitation in claim 7 that the titanium dioxide exists as titanium dioxide particles, Kim shows that the titanium dioxide are titanium dioxide particles (column 2, lines 3-9).

As to the new limitation in claim 7 that the particle size is determined using a Sedigraph method, claim 7 is rejected the phrase "is determined using a Sedigraph method" introduces a process limitation to the product claim. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claims are unpatentable even though the prior art was made by a different process. *MPEP 2113*. Further, process limitations are given no patentable weight in product claims.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of von Meer, U.S. Pat. No. 4,384,040 as previously stated in the

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Office Action submitted on April 25, 2002 in further view of in further view of Murschall et al., U.S. Pat. No. 5,900,294.

As to the new limitation in claim 1 that the titanium dioxide is oxidically coated, though Kim shows that the titanium dioxide particles are coated with a zinc coating (column 2, lines 3-9) to improve light resistance, Kim does not show that the zinc coating is a zinc oxide coating as in instant claim 1. Murschall shows a multilayer film comprising white pigments of rutile titanium dioxide with a coating of zinc oxide (column 3, lines 47-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a zinc oxide coating on titanium dioxide because it is known that a zinc oxide coating improves lightfastness.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Murschall et al., U.S. Pat. No. 5,900,294 as previously stated in the Office Action submitted on April 25, 2002.

As to the new limitation in claim 8 that the titanium dioxide particles have an oxidic coating, Murschall shows a multilayer film comprising white pigments of rutile titanium dioxide with a coating of zinc oxide (column 3, lines 47-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a zinc oxide coating on titanium dioxide because it is known that a zinc oxide coating improves lightfastness.

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of von Meer, U.S. Pat. No. 4,384,040 in further view of Murschall et al., U.S. Pat. No. 5,900,294.

Kim shows a white film (core layer) comprising polyethylene terephthalate (crystallizable thermoplastic), rutile-type titanium dioxide (white pigment) (column 2, lines 3-9), and

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bisbenzazole (optical brightener) (column 5, lines 13-22). Kim shows that the white film has a thickness of 12 micrometers (column 9, lines 11-16). Kim shows that the rutile-type titanium dioxide has an average particle diameter ranging from 0.1 to 3 micrometers (column 2, lines 54-55). Kim shows that the degree of whiteness of the film is greater than 85% (Table 2). Kim further shows that the titanium dioxide (white pigment) (column 2, lines 3-9) and bisbenzazole (optical brightener) are present throughout the film (Abstract).

Though Kim shows that the bisbenzazole whitening agent is added in an amount so that the reflectivity at 440 nm becomes greater than 75% (column 5, lines 21-22), Kim does not show that the bisbenzazole is 10-50,000 ppm of the weight of the crystallizable thermoplastic as in instant claim 4. However, such concentrations and percentages by weight are properties which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the concentrations and percentages by weight, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. concentrations and percentages by weight) fails to render claims patentable in the absence of unexpected results.

Kim does not show the blue dye and amount of blue dye as in instant claim 14. However, the amount of blue dye is a property which can be easily determined by one of ordinary skill in the art in order to enhance the whiteness of the film. With regard to the limitation of the amount of blue dye, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation

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conditions (e.g. amount of blue dye) fails to render claims patentable in the absence of unexpected results.

Von Meer shows a photographic paper wherein the white titanium dioxide pigmented paper is dyed with cobalt blue or ultramarine (column 3, line 68 to column 4, line 25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to cobalt blue or ultramarine in addition to the whitening titanium dioxide because it is known that cobalt blue and ultramarine is used to enhance the whiteness and to compensate for the yellowish tint of the invention.

Though Kim shows that the titanium dioxide particles are coated with a zinc coating (column 2, lines 3-9) to improve light resistance, Kim does not show that the zinc coating is a zinc oxide coating as in instant claim 1. Murschall shows a multilayer film comprising white pigments of rutile titanium dioxide with a coating of zinc oxide (column 3, lines 47-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a zinc oxide coating on titanium dioxide because it is known that a zinc oxide coating improves lightfastness.

Response to Arguments

Applicants' argument filed August 20, 2002 have been fully considered but they are not persuasive.

On page 5, Applicants argue that Kim does not show that the titanium dioxide particles are coated with an oxidative coating. This argument is moot in light of the rejections which includes Murschall, which teaches the oxidative coating on titanium dioxide particles.

On pages 5-6, Applicants argue that the dyes of von Meer are metal oxide compounds which are insoluble in water and are known to be soluble in glass and thus, it is not obvious that they would be soluble in polyester polymer as in the instant invention. Examiner is not persuaded because Applicants specifically show that the dyes of von Meer are polyester soluble in claim 14, namely cobalt blue and ultramarine. Further, von Meer shows a polyester resin mixture coating (Abstract) wherein the cobalt blue and ultramarine dyes are added to in order to enhance whiteness (column 4, lines 24-25). Thus, the blue dyes of von Meer are polyester-soluble.

On page 6, Applicants argue that Murschall does not teach the use of coated titanium dioxides in oriented opaque white polyester films and are instead used in olefinic films such as polypropylene. Examiner is not persuaded because Murschall also shows that the film can comprise polyethylenes (column 2, lines 57-61) and the coated titanium dioxides. Further, Murschall is used *in combination with* Kim to show that it is known in the art that titanium dioxide particles coated with an oxide are known for improving light.

Conclusion

Applicant's AMENDMENT necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kimberly T. Nguyen
Examiner
November 2, 2002

CYNTHIA H. KELLY
SUPERVISOR EXAMINER
TECHNOLOGY CENTER 1700

